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SEQUENCE LISTING

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<120> VR-OAC, AN OSMOTICALLY ACTIVATED CHANNEL PROTEIN, NUCLEIC ACIDS ENCODING IT, AND USES THEREOF

<130> 600-1-287N

<140> US 10/027,828

<141> 2001-10-25

<150> US 60/243,568

<151> 2000-10-26

<160> 20

<170> PatentIn version 3.1

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<212> DNA

<213> Homo sapiens

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 35 40 45

Pro Ser Pro Ala Asp Ala Ser Arg Pro Ala Gly Pro Gly Asp Gly Arg
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Pro Asn Leu Arg Met Lys Phe Gln Gly Ala Phe Arg Lys Gly Val Pro
 65 70 75 80

Asn Pro Ile Asp Leu Leu Glu Ser Thr Leu Tyr Glu Ser Ser Val Val
 85 90 95

Pro Gly Pro Lys Lys Ala Pro Met Asp Ser Leu Phe Asp Tyr Gly Thr
 100 105 110

Tyr Arg His His Ser Ser Asp Asn Lys Arg Trp Arg Lys Lys Ile Ile
 115 120 125

Glu Lys Gln Pro Gln Ser Pro Lys Ala Pro Ala Pro Gln Pro Pro Pro
 130 135 140

Ile Leu Lys Val Phe Asn Arg Pro Ile Leu Phe Asp Ile Val Ser Arg
 145 150 155 160

Gly Ser Thr Ala Asp Leu Asp Gly Leu Leu Pro Phe Leu Leu Thr His
165 170 175

Lys Lys Arg Leu Thr Asp Glu Glu Phe Arg Glu Pro Ser Thr Gly Lys
180 185 190

Thr Cys Leu Pro Lys Ala Leu Leu Asn Leu Ser Asn Gly Arg Asn Asp
195 200 205

Thr Ile Pro Val Leu Leu Asp Ile Ala Glu Arg Thr Gly Asn Met Arg
210 215 220

Glu Phe Ile Asn Ser Pro Phe Arg Asp Ile Tyr Tyr Arg Gly Gln Thr
225 230 235 240

Ala Leu His Ile Ala Ile Glu Arg Arg Cys Lys His Tyr Val Glu Leu
245 250 255

Leu Val Ala Gln Gly Ala Asp Val His Ala Gln Ala Arg Gly Arg Phe
260 265 270

Phe Gln Pro Lys Asp Glu Gly Gly Tyr Phe Tyr Phe Gly Glu Leu Pro
275 280 285

Leu Ser Leu Ala Ala Cys Thr Asn Gln Pro His Ile Val Asn Tyr Leu
290 295 300

Thr Glu Asn Pro His Lys Lys Ala Asp Met Arg Arg Gln Asp Ser Arg
305 310 315 320

Gly Asn Thr Val Leu His Ala Leu Val Ala Ile Ala Asp Asn Thr Arg
325 330 335

Glu Asn Thr Lys Phe Val Thr Lys Met Tyr Asp Leu Leu Leu Leu Lys
340 345 350

Cys Ala Arg Leu Phe Pro Asp Ser Asn Leu Glu Ala Val Leu Asn Asn
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Asp Gly Leu Ser Pro Leu Met Met Ala Ala Lys Thr Gly Lys Ile Gly
370 375 380

Val Phe Gln His Ile Ile Arg Arg Glu Val Thr Asp Glu Asp Thr Arg
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His Leu Ser Arg Lys Phe Lys Asp Trp Ala Tyr Gly Pro Val Tyr Ser
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Ser Leu Tyr Asp Leu Ser Ser Leu Asp Thr Cys Gly Glu Glu Ala Ser
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Val Leu Glu Ile Leu Val Tyr Asn Ser Lys Ile Glu Asn Arg His Glu
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Met Leu Ala Val Glu Pro Ile Asn Glu Leu Leu Arg Asp Lys Trp Arg
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Lys Phe Gly Ala Val Ser Phe Tyr Ile Asn Val Val Ser Tyr Leu Cys
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Ala Met Val Ile Phe Thr Leu Thr Ala Tyr Tyr Gln Pro Leu Glu Gly
485 490 495

Thr Pro Pro Tyr Pro Tyr Arg Thr Thr Val Asp Tyr Leu Arg Leu Ala
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Gly Glu Val Ile Thr Leu Phe Thr Gly Val Leu Phe Phe Phe Thr Asn
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Val Met Val Phe Ala Leu Val Leu Gly Trp Met Asn Ala Leu Tyr Phe
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Ile Leu Phe Lys Asp Leu Phe Arg Phe Leu Leu Val Tyr Leu Leu Phe

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Arg Thr Asp Asp Ala Pro Leu
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 35 40 45

Pro Ser Pro Ala Asp Ala Ser Arg Pro Ala Gly Pro Gly Asp Gly Arg
 50 55 60

Pro Asn Leu Arg Met Lys Phe Gln Gly Ala Phe Arg Lys Gly Val Pro
 65 70 75 80

Asn Pro Ile Asp Leu Leu Glu Ser Thr Leu Tyr Glu Ser Ser Val Val
 85 90 95

Pro Gly Pro Lys Lys Ala Pro Met Asp Ser Leu Phe Asp Tyr Gly Thr
 100 105 110

Tyr Arg His His Ser Ser Asp Asn Lys Arg Trp Arg Lys Lys Ile Ile
 115 120 125

Glu Lys Gln Pro Gln Ser Pro Lys Ala Pro Ala Pro Gln Pro Pro Pro
 130 135 140

Ile Leu Lys Val Phe Asn Arg Pro Ile Leu Phe Asp Ile Val Ser Arg
 145 150 155 160

Gly Ser Thr Ala Asp Leu Asp Gly Leu Leu Pro Phe Leu Leu Thr His
 165 170 175

Lys Lys Arg Leu Thr Asp Glu Glu Phe Arg Glu Pro Ser Thr Gly Lys
180 185 190

Thr Cys Leu Pro Lys Ala Leu Leu Asn Leu Ser Asn Gly Arg Asn Asp
195 200 205

Thr Ile Pro Val Leu Leu Asp Ile Ala Glu Arg Thr Gly Asn Met Arg
210 215 220

Glu Phe Ile Asn Ser Pro Phe Arg Asp Ile Tyr Tyr Arg Gly Gln Thr
225 230 235 240

Ala Leu His Ile Val Ile Glu Arg Arg Cys Lys His Tyr Val Glu Leu
245 250 255

Leu Val Ala Gln Gly Ala Asp Val His Ala Gln Ala Arg Gly Arg Phe
260 265 270

Phe Gln Pro Lys Asp Glu Gly Gly Tyr Phe Tyr Phe Gly Glu Leu Pro
275 280 285

Leu Ser Leu Ala Ala Cys Thr Asn Gln Pro His Ile Val Asn Tyr Leu
290 295 300

Thr Glu Asn Pro His Lys Lys Ala Asp Met Arg Arg Gln Asp Ser Arg
305 310 315 320

Gly Asn Thr Val Leu His Ala Leu Val Ala Ile Ala Asp Asn Thr Arg
325 330 335

Glu Asn Thr Lys Phe Val Thr Lys Met Tyr Asp Leu Leu Leu Lys
340 345 350

Cys Ala Arg Leu Phe Pro Asp Ser Asn Leu Glu Ala Val Leu Asn Asn
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Asp Gly Leu Ser Pro Leu Met Met Ala Ala Lys Thr Gly Lys Ile Gly
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Ile Phe Gln His Ile Ile Arg Arg Glu Val Thr Asp Glu Asp Thr Arg
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His Leu Ser Arg Lys Phe Lys Asp Trp Ala Tyr Gly Pro Val Tyr Ser
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Ser Leu Tyr Asp Leu Ser Ser Leu Asp Thr Cys Gly Glu Glu Ala Ser
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Val Leu Glu Ile Leu Val Tyr Asn Ser Lys Ile Glu Asn Arg His Glu
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Met Leu Ala Val Glu Pro Ile Asn Glu Leu Leu Arg Asp Lys Trp Arg
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Lys Phe Gly Ala Val Ser Phe Tyr Ile Asn Val Val Ser Tyr Leu Cys
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Ala Met Val Ile Phe Thr Leu Thr Ala Tyr Tyr Gln Pro Leu Glu Gly
485 490 495

Thr Pro Pro Tyr Pro Tyr Arg Thr Thr Val Asp Tyr Leu Arg Leu Ala
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Gly Glu Val Ile Thr Leu Phe Thr Gly Val Leu Phe Phe Phe Thr Asn
515 520 525

Ile Lys Asp Leu Phe Met Lys Lys Cys Pro Gly Val Asn Ser Leu Phe
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Ile Asp Gly Ser Phe Gln Leu Leu Tyr Phe Ile Tyr Ser Val Leu Val
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Ile Val Ser Ala Ala Leu Tyr Leu Ala Gly Ile Glu Ala Tyr Leu Ala
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Val Met Val Phe Ala Leu Val Leu Gly Trp Met Asn Ala Leu Tyr Phe
580 585 590

Thr Arg Gly Leu Lys Leu Thr Gly Thr Tyr Ser Ile Met Ile Gln Lys
595 600 605 ;

Ile Leu Phe Lys Asp Leu Phe Arg Phe Leu Leu Val Tyr Leu Leu Phe
610 615 620

Met Ile Gly Tyr Ala Ser Ala Leu Val Ser Leu Leu Asn Pro Cys Ala

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Asn Met Lys Val Cys Asn Glu Asp Gln Thr Asn Cys Thr Val Pro Thr						
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Tyr Pro Ser Cys Arg Asp Ser Glu Thr Phe Ser Thr Phe Leu Leu Asp						
	660			665		670
Leu Phe Lys Leu Thr Ile Gly Met Gly Asp Leu Glu Met Leu Ser Ser						
	675			680		685
Thr Lys Tyr Pro Val Val Phe Ile Ile Leu Leu Val Thr Tyr Ile Ile						
	690			695		700
Leu Thr Phe Val Leu Leu Leu Asn Met Leu Ile Ala Leu Met Gly Glu						
	705			710		715
Thr Val Gly Gln Val Ser Lys Glu Ser Lys His Ile Trp Lys Leu Gln						
	725			730		735
Trp Ala Thr Thr Ile Leu Asp Ile Glu Arg Ser Phe Pro Val Phe Leu						
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Arg Lys Ala Phe Arg Ser Gly Glu Met Val Thr Val Gly Lys Ser Ser						
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Asp Gly Thr Pro Asp Arg Arg Trp Cys Phe Arg Val Asp Glu Val Asn						
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Trp Ser His Trp Asn Gln Asn Leu Gly Ile Ile Asn Glu Asp Pro Gly						
	785			790		795
Lys Asn Glu Thr Tyr Gln Tyr Tyr Gly Phe Ser His Thr Val Gly Arg						
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Leu Arg Arg Asp Arg Trp Ser Ser Val Val Pro Arg Val Val Glu Leu						
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Asn Lys Asn Ser Asn Pro Asp Glu Val Val Val Pro Leu Asp Ser Met						
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Gly Asn Pro Arg Cys Asp Gly His Gln Gln Gly Tyr Pro Arg Lys Trp						
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Arg Thr Asp Asp Ala Pro Leu
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Leu Arg Asp Lys Trp Arg Lys Phe Gly Ala Val Ser Phe Tyr Ile Asn
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Val Val Ser Tyr Leu Cys Ala Met Val Ile Phe Thr Leu Thr Ala Tyr
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Tyr Gln Pro Leu Glu Gly Thr Pro Pro Tyr Pro Tyr Arg Thr Thr Val
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Asp Tyr Leu Arg Leu Ala Gly Glu Val Ile Thr Leu Leu Thr Gly Val
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Leu Phe Phe Phe Thr Ser Ile Lys Asp Leu Phe Met Lys Lys Cys Pro
115 120 125

Gly Val Asn Ser Leu Phe Val Asp Gly Ser Phe Gln Leu Leu Tyr Phe
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Ile Tyr Ser Val Leu Val Val Val Ser Ala Ala Leu Tyr Leu Ala Gly
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Ile Glu Ala Tyr Leu Ala Val Met Val Phe Ala Leu Val Leu Gly Trp
165 170 175

Met Asn Ala Leu Tyr Phe Thr Arg Gly Leu Lys Leu Thr Gly Thr Tyr
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Ser Ile Met Ile Gln Lys Ile Leu Phe Lys Asp Leu Phe Arg Phe Leu
195 200 205

Leu Val Tyr Leu Leu Phe Met Ile Gly Tyr Ala Ser Ala Leu Val Thr
210 215 220

Leu Leu Asn Pro Cys Thr Asn Met Lys Val Cys Asn Glu Asp Gln Ser
225 230 235 240

Asn Cys Thr Val Pro Ser Tyr Pro Ala Cys Arg Asp Ser Glu Thr Phe
245 250 255

Ser Ala Phe Leu Leu Asp Leu Phe Lys Leu Thr Ile Gly Met Gly Asp
260 265 270

Leu Glu Met Leu Ser Ser Ala Lys Tyr Pro Val Val Phe Ile Leu Leu
275 280 285

Leu Val Thr Tyr Ile Ile Leu Thr Phe Val Leu Leu Leu Asn Met Leu
290 295 300

Ile Ala Leu Met Gly Glu Thr Val Gly Gln Val Ser Lys Glu Ser Lys
305 310 315 320

His Ile Trp Lys Leu Gln Trp Ala Thr Thr Ile Leu Asp Ile Glu Arg
325 330 335

Ser Phe Pro Val Phe Leu Arg Lys Ala Phe Arg Ser Gly Glu Met Val
340 345 350

Thr Val Gly Lys Ser Ser Asp Gly Thr Pro Asp Arg Arg Trp Cys Phe
355 360 365

Arg Val Asp Glu Val Asn Trp Ser His Trp Asn Gln Asn Leu Gly Ile
370 375 380

Ile Asn Glu Asp Pro Gly Lys Ser Glu Ile Tyr Gln Tyr Tyr Gly Phe
385 390 395 400

Ser His Thr Met Gly Arg Leu Arg Arg Asp Arg Trp Ser Ser Val Val

	405		410		415
Pro Arg Val Val Glu Leu Asn Lys Asn Ser Gly Thr Asp Glu Val Val					
	420		425		430
Val Pro Leu Asp Asn Leu Gly Asn Pro Asn Cys Asp Gly His Gln Gln					
	435		440		445
Gly Tyr Ala Pro Lys Trp Arg Ala Glu Asp Ala Pro Leu					
	450		455		460

<210> 6
 <211> 830
 <212> PRT
 <213> Rattus norvegicus

<400> 6

Met Ala Asp Pro Gly Asp Gly Pro Arg Ala Ala Pro Gly Asp Val Ala			
1	5	10	15
Glu Pro Pro Gly Asp Glu Ser Gly Thr Ser Gly Gly Glu Ala Phe Pro			
	20	25	30
Leu Ser Ser Leu Ala Asn Leu Phe Glu Gly Glu Glu Gly Ser Ser Ser			
	35	40	45
Leu Ser Pro Val Asp Ala Ser Arg Pro Ala Gly Pro Gly Asp Gly Arg			
	50	55	60
Pro Asn Leu Arg Met Lys Phe Gln Gly Ala Phe Arg Lys Gly Val Pro			
65	70	75	80
Asn Pro Ile Asp Leu Leu Glu Ser Thr Leu Tyr Glu Ser Ser Val Val			
	85	90	95
Pro Gly Pro Lys Lys Ala Pro Met Asp Ser Leu Phe Asp Tyr Gly Thr			
	100	105	110
Tyr Arg His His Pro Ser Asp Asn Lys Arg Trp Arg Arg Lys Val Val			
	115	120	125
Glu Lys Gln Pro Gln Ser Pro Lys Ala Pro Ala Pro Gln Pro Pro Pro			
	130	135	140

Ile Leu Lys Val Phe Asn Arg Pro Ile Leu Phe Asp Ile Val Ser Arg
145 150 155 160

Gly Ser Thr Ala Asp Leu Asp Gly Leu Leu Ser Tyr Leu Leu Thr His
165 170 175

Lys Lys Arg Leu Thr Asp Glu Glu Phe Arg Glu Pro Ser Thr Gly Lys
180 185 190

Thr Cys Leu Pro Lys Ala Leu Leu Asn Leu Ser Asn Gly Arg Asn Asp
195 200 205

Thr Ile Pro Val Leu Leu Asp Ile Ala Glu Arg Thr Gly Asn Met Arg
210 215 220

Glu Phe Ile Asn Ser Pro Phe Arg Asp Ile Tyr Tyr Arg Gly Gln Thr
225 230 235 240

Ala Leu His Ile Ala Ile Glu Arg Arg Cys Lys His Tyr Val Glu Leu
245 250 255

Leu Val Ala Gln Gly Ala Asp Val His Ala Gln Ala Arg Gly Arg Phe
260 265 270

Phe Gln Pro Lys Asp Glu Gly Gly Tyr Phe Tyr Phe Gly Glu Leu Pro
275 280 285

Leu Ser Leu Ala Ala Cys Thr Asn Gln Pro His Ile Val Asn Tyr Leu
290 295 300

Thr Glu Asn Pro His Lys Lys Ala Asp Met Arg Arg Gln Asp Ser Arg
305 310 315 320

Gly Asn Thr Val Leu His Ala Leu Val Ala Ile Ala Asp Asn Thr Arg
325 330 335

Glu Asn Thr Lys Phe Val Thr Lys Met Tyr Asp Leu Leu Leu Leu Lys
340 345 350

Cys Ser Arg Leu Phe Pro Asp Ser Asn Leu Glu Thr Val Leu Asn Asn
355 360 365

Asp Gly Leu Ser Pro Leu Met Met Ala Ala Lys Thr Gly Lys Ile Gly
 370 375 380

Val Phe Gln His Ile Ile Arg Arg Glu Val Thr Asp Glu Asp Thr Arg
 385 390 395 400

His Leu Ser Arg Lys Phe Lys Asp Trp Ala Tyr Gly Pro Val Tyr Ser
 405 410 415

Ser Leu Tyr Asp Leu Ser Ser Leu Asp Thr Cys Gly Glu Glu Val Ser
 420 425 430

Val Leu Glu Ile Leu Val Tyr Asn Ser Lys Ile Glu Asn Arg His Glu
 435 440 445

Met Leu Ala Val Glu Pro Ile Asn Glu Leu Leu Arg Asp Lys Trp Arg
 450 455 460

Lys Phe Gly Ala Val Ser Phe Tyr Ile Asn Val Val Ser Tyr Leu Cys
 465 470 475 480

Ala Met Val Ile Phe Thr Leu Thr Ala Tyr Tyr Gln Pro Leu Glu Gly
 485 490 495

Thr Pro Pro Tyr Pro Tyr Arg Thr Thr Val Asp Tyr Leu Arg Leu Ala
 500 505 510

Gly Glu Val Ile Thr Leu Leu Thr Gly Val Leu Phe Phe Phe Thr Ser
 515 520 525

Ile Lys Asp Leu Phe Met Lys Lys Cys Pro Gly Val Asn Ser Leu Phe
 530 535 540

Val Asp Gly Ser Phe Gln Leu Leu Tyr Phe Ile Tyr Ser Val Leu Val
 545 550 555 560

Val Val Ser Ala Ala Leu Tyr Leu Ala Gly Ile Glu Ala Tyr Leu Ala
 565 570 575

Val Met Val Phe Ala Leu Val Leu Gly Trp Met Asn Ala Leu Tyr Phe
 580 585 590

Thr Arg Gly Leu Lys Leu Thr Gly Thr Tyr Ser Ile Met Ile Gln Lys

595	600	605
Ile Leu Phe Lys Asp Leu Phe Arg Phe Leu Leu Val Tyr Leu Leu Phe 610 615 620		
Met Ile Gly Tyr Ala Ser Ala Leu Val Thr Leu Leu Asn Pro Cys Thr 625 630 635 640		
Asn Met Lys Val Cys Asn Glu Asp Gln Ser Asn Cys Thr Val Pro Ser 645 650 655		
Tyr Pro Ala Cys Arg Asp Ser Glu Thr Phe Ser Ala Phe Leu Leu Asp 660 665 670		
Leu Phe Lys Leu Thr Ile Gly Met Gly Asp Leu Glu Met Leu Ser Ser 675 680 685		
Ala Lys Tyr Pro Val Val Phe Ile Leu Leu Leu Val Thr Tyr Ile Ile 690 695 700		
Leu Thr Phe Val Leu Leu Leu Asn Met Leu Ile Ala Leu Met Gly Glu 705 710 715 720		
Thr Val Gly Gln Val Ser Lys Glu Ser Lys His Ile Trp Lys Leu Gln 725 730 735		
Trp Ala Thr Thr Gln Val Asn Trp Ser His Trp Asn Gln Asn Leu Gly 740 745 750		
Ile Ile Asn Glu Asp Pro Gly Lys Ser Glu Ile Tyr Gln Tyr Tyr Gly 755 760 765		
Phe Ser His Thr Met Gly Arg Leu Arg Arg Asp Arg Trp Ser Ser Val 770 775 780		
Val Pro Arg Val Val Glu Leu Asn Lys Asn Ser Gly Thr Asp Glu Val 785 790 795 800		
Val Val Pro Leu Asp Asn Leu Gly Asn Pro Asn Cys Asp Gly His Gln 805 810 815		
Gln Gly Tyr Ala Pro Lys Trp Arg Ala Glu Asp Ala Pro Leu 820 825 830		

<210> 7
<211> 420
<212> PRT
<213> Rattus norvegicus

<400> 7

Tyr Gly Pro Val Tyr Ser Ser Leu Tyr Asp Leu Ser Ser Leu Asp Thr
1 5 10 15

Cys Gly Glu Glu Val Ser Val Leu Glu Ile Leu Val Tyr Asn Ser Lys
20 25 30

Ile Glu Asn Arg His Glu Met Leu Ala Val Glu Pro Ile Asn Glu Leu
35 40 45

Leu Arg Asp Lys Trp Arg Lys Phe Gly Ala Val Ser Phe Tyr Ile Asn
50 55 60

Val Val Ser Tyr Leu Cys Ala Met Val Ile Phe Thr Leu Thr Ala Tyr
65 70 75 80

Tyr Gln Pro Leu Glu Gly Thr Pro Pro Tyr Pro Tyr Arg Thr Thr Val
85 90 95

Asp Tyr Leu Arg Leu Ala Gly Glu Val Ile Thr Leu Leu Thr Gly Val
100 105 110

Leu Phe Phe Phe Thr Ser Ile Lys Asp Leu Phe Met Lys Lys Cys Pro
115 120 125

Gly Val Asn Ser Leu Phe Val Asp Gly Ser Phe Gln Leu Leu Tyr Phe
130 135 140

Ile Tyr Ser Val Leu Val Val Val Ser Ala Ala Leu Tyr Leu Ala Gly
145 150 155 160

Ile Glu Ala Tyr Leu Ala Val Met Val Phe Ala Leu Val Leu Gly Trp
165 170 175

Met Asn Ala Leu Tyr Phe Thr Arg Gly Leu Lys Leu Thr Gly Thr Tyr
180 185 190

Ser Ile Met Ile Gln Lys Ile Leu Phe Lys Asp Leu Phe Arg Phe Leu
 195 200 205

Leu Val Tyr Leu Leu Phe Met Ile Gly Tyr Ala Ser Ala Leu Val Thr
 210 215 220

Leu Leu Asn Pro Cys Thr Asn Met Lys Val Cys Asn Glu Asp Gln Ser
 225 230 235 240

Asn Cys Thr Val Pro Ser Tyr Pro Ala Cys Arg Asp Ser Glu Thr Phe
 245 250 255

Ser Ala Phe Leu Leu Asp Leu Phe Lys Leu Thr Ile Gly Met Gly Asp
 260 265 270

Leu Glu Met Leu Ser Ser Ala Lys Tyr Pro Val Val Phe Ile Leu Leu
 275 280 285

Leu Val Thr Tyr Ile Ile Leu Thr Phe Val Leu Leu Leu Asn Met Leu
 290 295 300

Ile Ala Leu Met Gly Glu Thr Val Gly Gln Val Ser Lys Glu Ser Lys
 305 310 315 320

His Ile Trp Lys Leu Gln Trp Ala Thr Thr Glu Val Asn Trp Ser His
 325 330 335

Trp Asn Gln Asn Leu Gly Ile Ile Asn Glu Asp Pro Gly Lys Ser Glu
 340 345 350

Ile Tyr Gln Tyr Tyr Gly Phe Ser His Thr Met Gly Arg Leu Arg Arg
 355 360 365

Asp Arg Trp Ser Ser Val Val Pro Arg Val Val Glu Leu Asn Lys Asn
 370 375 380

Ser Gly Thr Asp Glu Val Val Val Pro Leu Asp Asn Leu Gly Asn Pro
 385 390 395 400

Asn Cys Asp Gly His Gln Gln Gly Tyr Ala Pro Lys Trp Arg Ala Glu
 405 410 415

Asp Ala Pro Leu

420

<210> 8
<211> 871
<212> PRT
<213> Rattus norvegicus

<400> 8

Met Ala Asp Pro Gly Asp Gly Pro Arg Ala Ala Pro Gly Asp Val Ala
1 5 10 15

Glu Pro Pro Gly Asp Glu Ser Gly Thr Ser Gly Gly Glu Ala Phe Pro
20 25 30

Leu Ser Ser Leu Ala Asn Leu Phe Glu Gly Glu Glu Gly Ser Ser Ser
35 40 45

Leu Ser Pro Val Asp Ala Ser Arg Pro Ala Gly Pro Gly Asp Gly Arg
50 55 60

Pro Asn Leu Arg Met Lys Phe Gln Gly Ala Phe Arg Lys Gly Val Pro
65 70 75 80

Asn Pro Ile Asp Leu Leu Glu Ser Thr Leu Tyr Glu Ser Ser Val Val
85 90 95

Pro Gly Pro Lys Lys Ala Pro Met Asp Ser Leu Phe Asp Tyr Gly Thr
100 105 110

Tyr Arg His His Pro Ser Asp Asn Lys Arg Trp Arg Arg Lys Val Val
115 120 125

Glu Lys Gln Pro Gln Ser Pro Lys Ala Pro Ala Pro Gln Pro Pro Pro
130 135 140

Ile Leu Lys Val Phe Asn Arg Pro Ile Leu Phe Asp Ile Val Ser Arg
145 150 155 160

Gly Ser Thr Ala Asp Leu Asp Gly Leu Leu Ser Tyr Leu Leu Thr His
165 170 175

Lys Lys Arg Leu Thr Asp Glu Glu Phe Arg Glu Pro Ser Thr Gly Lys
180 185 190

Thr Cys Leu Pro Lys Ala Leu Leu Asn Leu Ser Asn Gly Arg Asn Asp
 195 200 205

Thr Ile Pro Val Leu Leu Asp Ile Ala Glu Arg Thr Gly Asn Met Arg
 210 215 220

Glu Phe Ile Asn Ser Pro Phe Arg Asp Ile Tyr Tyr Arg Gly Gln Thr
 225 230 235 240

Ala Leu His Ile Ala Ile Glu Arg Arg Cys Lys His Tyr Val Glu Leu
 245 250 255

Leu Val Ala Gln Gly Ala Asp Val His Ala Gln Ala Arg Gly Arg Phe
 260 265 270

Phe Gln Pro Lys Asp Glu Gly Gly Tyr Phe Tyr Phe Gly Glu Leu Pro
 275 280 285

Leu Ser Leu Ala Ala Cys Thr Asn Gln Pro His Ile Val Asn Tyr Leu
 290 295 300

Thr Glu Asn Pro His Lys Lys Ala Asp Met Arg Arg Gln Asp Ser Arg
 305 310 315 320

Gly Asn Thr Val Leu His Ala Leu Val Ala Ile Ala Asp Asn Thr Arg
 325 330 335

Glu Asn Thr Lys Phe Val Thr Lys Met Tyr Asp Leu Leu Leu Leu Lys
 340 345 350

Cys Ser Arg Leu Phe Pro Asp Ser Asn Leu Glu Thr Val Leu Asn Asn
 355 360 365

Asp Gly Leu Ser Pro Leu Met Met Ala Ala Lys Thr Gly Lys Ile Gly
 370 375 380

Val Phe Gln His Ile Ile Arg Arg Glu Val Thr Asp Glu Asp Thr Arg
 385 390 395 400

His Leu Ser Arg Lys Phe Lys Asp Trp Ala Tyr Gly Pro Val Tyr Ser
 405 410 415

Ser Leu Tyr Asp Leu Ser Ser Leu Asp Thr Cys Gly Glu Glu Val Ser
 420 425 430

Val Leu Glu Ile Leu Val Tyr Asn Ser Lys Ile Glu Asn Arg His Glu
 435 440 445

Met Leu Ala Val Glu Pro Ile Asn Glu Leu Leu Arg Asp Lys Trp Arg
 450 455 460

Lys Phe Gly Ala Val Ser Phe Tyr Ile Asn Val Val Ser Tyr Leu Cys
 465 470 475 480

Ala Met Val Ile Phe Thr Leu Thr Ala Tyr Tyr Gln Pro Leu Glu Gly
 485 490 495

Thr Pro Pro Tyr Pro Tyr Arg Thr Thr Val Asp Tyr Leu Arg Leu Ala
 500 505 510

Gly Glu Val Ile Thr Leu Leu Thr Gly Val Leu Phe Phe Phe Thr Ser
 515 520 525

Ile Lys Asp Leu Phe Met Lys Lys Cys Pro Gly Val Asn Ser Leu Phe
 530 535 540

Val Asp Gly Ser Phe Gln Leu Leu Tyr Phe Ile Tyr Ser Val Leu Val
 545 550 555 560

Val Val Ser Ala Ala Leu Tyr Leu Ala Gly Ile Glu Ala Tyr Leu Ala
 565 570 575

Val Met Val Phe Ala Leu Val Leu Gly Trp Met Asn Ala Leu Tyr Phe
 580 585 590

Thr Arg Gly Leu Lys Leu Thr Gly Thr Tyr Ser Ile Met Ile Gln Lys
 595 600 605

Ile Leu Phe Lys Asp Leu Phe Arg Phe Leu Leu Val Tyr Leu Leu Phe
 610 615 620

Met Ile Gly Tyr Ala Ser Ala Leu Val Thr Leu Leu Asn Pro Cys Thr
 625 630 635 640

Asn Met Lys Val Cys Asn Glu Asp Gln Ser Asn Cys Thr Val Pro Ser

645

650

655

Tyr Pro Ala Cys Arg Asp Ser Glu Thr Phe Ser Ala Phe Leu Leu Lys
 660 665 670

Leu Phe Lys Leu Thr Ile Gly Met Gly Asp Leu Glu Met Leu Ser Ser
 675 680 685

Ala Lys Tyr Pro Val Val Phe Ile Leu Leu Leu Val Thr Tyr Ile Ile
 690 695 700

Leu Thr Phe Val Leu Leu Leu Asn Met Leu Ile Ala Leu Met Gly Glu
 705 710 715 720

Thr Val Gly Gln Val Ser Lys Glu Ser Lys His Ile Trp Lys Leu Gln
 725 730 735

Trp Ala Thr Thr Ile Leu Asp Ile Glu Arg Ser Phe Pro Val Phe Leu
 740 745 750

Arg Lys Ala Phe Arg Ser Gly Glu Met Val Thr Val Gly Lys Ser Ser
 755 760 765

Asp Gly Thr Pro Asp Arg Arg Trp Cys Phe Arg Val Asp Glu Val Asn
 770 775 780

Trp Ser His Trp Asn Gln Asn Leu Gly Ile Ile Asn Glu Asp Pro Gly
 785 790 795 800

Lys Ser Glu Ile Tyr Gln Tyr Tyr Gly Phe Ser His Thr Met Gly Arg
 805 810 815

Leu Arg Arg Asp Arg Trp Ser Ser Val Val Pro Arg Val Val Glu Leu
 820 825 830

Asn Lys Asn Ser Gly Thr Asp Glu Val Val Val Pro Leu Asp Asn Leu
 835 840 845

Gly Asn Pro Asn Cys Asp Gly His Gln Gln Gly Tyr Ala Pro Lys Trp
 850 855 860

Arg Ala Glu Asp Ala Pro Leu
 865 870

<210> 9
<211> 871
<212> PRT
<213> Rattus norvegicus

<400> 9

Met Ala Asp Pro Gly Asp Gly Pro Arg Ala Ala Pro Gly Asp Val Ala
1 5 10 15

Glu Pro Pro Gly Asp Glu Ser Gly Thr Ser Gly Gly Glu Ala Phe Pro
20 25 30

Leu Ser Ser Leu Ala Asn Leu Phe Glu Gly Glu Glu Gly Ser Ser Ser
35 40 45

Leu Ser Pro Val Asp Ala Ser Arg Pro Ala Gly Pro Gly Asp Gly Arg
50 55 60

Pro Asn Leu Arg Met Lys Phe Gln Gly Ala Phe Arg Lys Gly Val Pro
65 70 75 80

Asn Pro Ile Asp Leu Leu Glu Ser Thr Leu Tyr Glu Ser Ser Val Val
85 90 95

Pro Gly Pro Lys Lys Ala Pro Met Asp Ser Leu Phe Asp Tyr Gly Thr
100 105 110

Tyr Arg His His Pro Ser Asp Asn Lys Arg Trp Arg Arg Lys Val Val
115 120 125

Glu Lys Gln Pro Gln Ser Pro Lys Ala Pro Ala Pro Gln Pro Pro Pro
130 135 140

Ile Leu Lys Val Phe Asn Arg Pro Ile Leu Phe Asp Ile Val Ser Arg
145 150 155 160

Gly Ser Thr Ala Asp Leu Asp Gly Leu Leu Ser Tyr Leu Leu Thr His
165 170 175

Lys Lys Arg Leu Thr Asp Glu Glu Phe Arg Glu Pro Ser Thr Gly Lys
180 185 190

Thr	Cys	Leu	Pro	Lys	Ala	Leu	Leu	Asn	Leu	Ser	Asn	Gly	Arg	Asn	Asp	195	200	205	
Thr	Ile	Pro	Val	Leu	Leu	Asp	Ile	Ala	Glu	Arg	Thr	Gly	Asn	Met	Arg	210	215	220	
Glu	Phe	Ile	Asn	Ser	Pro	Phe	Arg	Asp	Ile	Tyr	Tyr	Arg	Gly	Gln	Thr	225	230	235	240
Ala	Leu	His	Ile	Ala	Ile	Glu	Arg	Arg	Cys	Lys	His	Tyr	Val	Glu	Leu	245	250	255	
Leu	Val	Ala	Gln	Gly	Ala	Asp	Val	His	Ala	Gln	Ala	Arg	Gly	Arg	Phe	260	265	270	
Phe	Gln	Pro	Lys	Asp	Glu	Gly	Gly	Tyr	Phe	Tyr	Phe	Gly	Glu	Leu	Pro	275	280	285	
Leu	Ser	Leu	Ala	Ala	Cys	Thr	Asn	Gln	Pro	His	Ile	Val	Asn	Tyr	Leu	290	295	300	
Thr	Glu	Asn	Pro	His	Lys	Lys	Ala	Asp	Met	Arg	Arg	Gln	Asp	Ser	Arg	305	310	315	320
Gly	Asn	Thr	Val	Leu	His	Ala	Leu	Val	Ala	Ile	Ala	Asp	Asn	Thr	Arg	325	330	335	
Glu	Asn	Thr	Lys	Phe	Val	Thr	Lys	Met	Tyr	Asp	Leu	Leu	Leu	Leu	Lys	340	345	350	
Cys	Ser	Arg	Leu	Phe	Pro	Asp	Ser	Asn	Leu	Glu	Thr	Val	Leu	Asn	Asn	355	360	365	
Asp	Gly	Leu	Ser	Pro	Leu	Met	Met	Ala	Ala	Lys	Thr	Gly	Lys	Ile	Gly	370	375	380	
Val	Phe	Gln	His	Ile	Ile	Arg	Arg	Glu	Val	Thr	Asp	Glu	Asp	Thr	Arg	385	390	395	400
His	Leu	Ser	Arg	Lys	Phe	Lys	Asp	Trp	Ala	Tyr	Gly	Pro	Val	Tyr	Ser	405	410	415	
Ser	Leu	Tyr	Asp	Leu	Ser	Ser	Leu	Asp	Thr	Cys	Gly	Glu	Glu	Val	Ser				

420

425

430

Val Leu Glu Ile Leu Val Tyr Asn Ser Lys Ile Glu Asn Arg His Glu
 435 440 445

Met Leu Ala Val Glu Pro Ile Asn Glu Leu Leu Arg Asp Lys Trp Arg
 450 455 460

Lys Phe Gly Ala Val Ser Phe Tyr Ile Asn Val Val Ser Tyr Leu Cys
 465 470 475 480

Ala Met Val Ile Phe Thr Leu Thr Ala Tyr Tyr Gln Pro Leu Glu Gly
 485 490 495

Thr Pro Pro Tyr Pro Tyr Arg Thr Thr Val Asp Tyr Leu Arg Leu Ala
 500 505 510

Gly Glu Val Ile Thr Leu Leu Thr Gly Val Leu Phe Phe Phe Thr Ser
 515 520 525

Ile Lys Asp Leu Phe Met Lys Lys Cys Pro Gly Val Asn Ser Leu Phe
 530 535 540

Val Asp Gly Ser Phe Gln Leu Leu Tyr Phe Ile Tyr Ser Val Leu Val
 545 550 555 560

Val Val Ser Ala Ala Leu Tyr Leu Ala Gly Ile Glu Ala Tyr Leu Ala
 565 570 575

Val Met Val Phe Ala Leu Val Leu Gly Trp Met Asn Ala Leu Tyr Phe
 580 585 590

Thr Arg Gly Leu Lys Leu Thr Gly Thr Tyr Ser Ile Met Ile Gln Lys
 595 600 605

Ile Leu Phe Lys Asp Leu Phe Arg Phe Leu Leu Val Tyr Leu Leu Phe
 610 615 620

Met Ile Gly Tyr Ala Ser Ala Leu Val Thr Leu Leu Asn Pro Cys Thr
 625 630 635 640

Asn Met Lys Val Cys Asn Glu Asp Gln Ser Asn Cys Thr Val Pro Ser
 645 650 655

Tyr Pro Ala Cys Arg Asp Ser Glu Thr Phe Ser Ala Phe Leu Leu Asp
 660 665 670

Leu Phe Lys Leu Thr Ile Gly Met Gly Lys Leu Glu Met Leu Ser Ser
 675 680 685

Ala Lys Tyr Pro Val Val Phe Ile Leu Leu Leu Val Thr Tyr Ile Ile
 690 695 700

Leu Thr Phe Val Leu Leu Leu Asn Met Leu Ile Ala Leu Met Gly Glu
 705 710 715 720

Thr Val Gly Gln Val Ser Lys Glu Ser Lys His Ile Trp Lys Leu Gln
 725 730 735

Trp Ala Thr Thr Ile Leu Asp Ile Glu Arg Ser Phe Pro Val Phe Leu
 740 745 750

Arg Lys Ala Phe Arg Ser Gly Glu Met Val Thr Val Gly Lys Ser Ser
 755 760 765

Asp Gly Thr Pro Asp Arg Arg Trp Cys Phe Arg Val Asp Glu Val Asn
 770 775 780

Trp Ser His Trp Asn Gln Asn Leu Gly Ile Ile Asn Glu Asp Pro Gly
 785 790 795 800

Lys Ser Glu Ile Tyr Gln Tyr Tyr Gly Phe Ser His Thr Met Gly Arg
 805 810 815

Leu Arg Arg Asp Arg Trp Ser Ser Val Val Pro Arg Val Val Glu Leu
 820 825 830

Asn Lys Asn Ser Gly Thr Asp Glu Val Val Val Pro Leu Asp Asn Leu
 835 840 845

Gly Asn Pro Asn Cys Asp Gly His Gln Gln Gly Tyr Ala Pro Lys Trp
 850 855 860

Arg Ala Glu Asp Ala Pro Leu
 865 870

<210> 10
<211> 871
<212> PRT
<213> Rattus norvegicus

<400> 10

Met Ala Asp Pro Gly Asp Gly Pro Arg Ala Ala Pro Gly Asp Val Ala
1 5 10 15

Glu Pro Pro Gly Asp Glu Ser Gly Thr Ser Gly Gly Glu Ala Phe Pro
20 25 30

Leu Ser Ser Leu Ala Asn Leu Phe Glu Gly Glu Glu Gly Ser Ser Ser
35 40 45

Leu Ser Pro Val Asp Ala Ser Arg Pro Ala Gly Pro Gly Asp Gly Arg
50 55 60

Pro Asn Leu Arg Met Lys Phe Gln Gly Ala Phe Arg Lys Gly Val Pro
65 70 75 80

Asn Pro Ile Asp Leu Leu Glu Ser Thr Leu Tyr Glu Ser Ser Val Val
85 90 95

Pro Gly Pro Lys Lys Ala Pro Met Asp Ser Leu Phe Asp Tyr Gly Thr
100 105 110

Tyr Arg His His Pro Ser Asp Asn Lys Arg Trp Arg Arg Lys Val Val
115 120 125

Glu Lys Gln Pro Gln Ser Pro Lys Ala Pro Ala Pro Gln Pro Pro Pro
130 135 140

Ile Leu Lys Val Phe Asn Arg Pro Ile Leu Phe Asp Ile Val Ser Arg
145 150 155 160

Gly Ser Thr Ala Asp Leu Asp Gly Leu Leu Ser Tyr Leu Leu Thr His
165 170 175

Lys Lys Arg Leu Thr Asp Glu Glu Phe Arg Glu Pro Ser Thr Gly Lys
180 185 190

Thr Cys Leu Pro Lys Ala Leu Leu Asn Leu Ser Asn Gly Arg Asn Asp

195	200	205
Thr Ile Pro Val Leu Leu Asp Ile Ala Glu Arg Thr Gly Asn Met Arg 210 215 220		
Glu Phe Ile Asn Ser Pro Phe Arg Asp Ile Tyr Tyr Arg Gly Gln Thr 225 230 235 240		
Ala Leu His Ile Ala Ile Glu Arg Arg Cys Lys His Tyr Val Glu Leu 245 250 255		
Leu Val Ala Gln Gly Ala Asp Val His Ala Gln Ala Arg Gly Arg Phe 260 265 270		
Phe Gln Pro Lys Asp Glu Gly Gly Tyr Phe Tyr Phe Gly Glu Leu Pro 275 280 285		
Leu Ser Leu Ala Ala Cys Thr Asn Gln Pro His Ile Val Asn Tyr Leu 290 295 300		
Thr Glu Asn Pro His Lys Lys Ala Asp Met Arg Arg Gln Asp Ser Arg 305 310 315 320		
Gly Asn Thr Val Leu His Ala Leu Val Ala Ile Ala Asp Asn Thr Arg 325 330 335		
Glu Asn Thr Lys Phe Val Thr Lys Met Tyr Asp Leu Leu Leu Leu Lys 340 345 350		
Cys Ser Arg Leu Phe Pro Asp Ser Asn Leu Glu Thr Val Leu Asn Asn 355 360 365		
Asp Gly Leu Ser Pro Leu Met Met Ala Ala Lys Thr Gly Lys Ile Gly 370 375 380		
Val Phe Gln His Ile Ile Arg Arg Glu Val Thr Asp Glu Asp Thr Arg 385 390 395 400		
His Leu Ser Arg Lys Phe Lys Asp Trp Ala Tyr Gly Pro Val Tyr Ser 405 410 415		
Ser Leu Tyr Asp Leu Ser Ser Leu Asp Thr Cys Gly Glu Glu Val Ser 420 425 430		

Val Leu Glu Ile Leu Val Tyr Asn Ser Lys Ile Glu Asn Arg His Glu
435 440 445

Met Leu Ala Val Glu Pro Ile Asn Glu Leu Leu Arg Asp Lys Trp Arg
450 455 460

Lys Phe Gly Ala Val Ser Phe Tyr Ile Asn Val Val Ser Tyr Leu Cys
465 470 475 480

Ala Met Val Ile Phe Thr Leu Thr Ala Tyr Tyr Gln Pro Leu Glu Gly
485 490 495

Thr Pro Pro Tyr Pro Tyr Arg Thr Thr Val Asp Tyr Leu Arg Leu Ala
500 505 510

Gly Glu Val Ile Thr Leu Leu Thr Gly Val Leu Phe Phe Phe Thr Ser
515 520 525

Ile Lys Asp Leu Phe Met Lys Lys Cys Pro Gly Val Asn Ser Leu Phe
530 535 540

Val Asp Gly Ser Phe Gln Leu Leu Tyr Phe Ile Tyr Ser Val Leu Val
545 550 555 560

Val Val Ser Ala Ala Leu Tyr Leu Ala Gly Ile Glu Ala Tyr Leu Ala
565 570 575

Val Met Val Phe Ala Leu Val Leu Gly Trp Met Asn Ala Leu Tyr Phe
580 585 590

Thr Arg Gly Leu Lys Leu Thr Gly Thr Tyr Ser Ile Met Ile Gln Lys
595 600 605

Ile Leu Phe Lys Asp Leu Phe Arg Phe Leu Leu Val Tyr Leu Leu Phe
610 615 620

Met Ile Gly Tyr Ala Ser Ala Leu Val Thr Leu Leu Asn Pro Cys Thr
625 630 635 640

Asn Met Lys Val Cys Asn Glu Asp Gln Ser Asn Cys Thr Val Pro Ser
645 650 655

Tyr Pro Ala Cys Arg Asp Ser Glu Thr Phe Ser Ala Phe Leu Leu Asp
 660 665 670

Leu Phe Lys Leu Thr Ile Gly Lys Gly Asp Leu Glu Met Leu Ser Ser
 675 680 685

Ala Lys Tyr Pro Val Val Phe Ile Leu Leu Leu Val Thr Tyr Ile Ile
 690 695 700

Leu Thr Phe Val Leu Leu Leu Asn Met Leu Ile Ala Leu Met Gly Glu
 705 710 715 720

Thr Val Gly Gln Val Ser Lys Glu Ser Lys His Ile Trp Lys Leu Gln
 725 730 735

Trp Ala Thr Thr Ile Leu Asp Ile Glu Arg Ser Phe Pro Val Phe Leu
 740 745 750

Arg Lys Ala Phe Arg Ser Gly Glu Met Val Thr Val Gly Lys Ser Ser
 755 760 765

Asp Gly Thr Pro Asp Arg Arg Trp Cys Phe Arg Val Asp Glu Val Asn
 770 775 780

Trp Ser His Trp Asn Gln Asn Leu Gly Ile Ile Asn Glu Asp Pro Gly
 785 790 795 800

Lys Ser Glu Ile Tyr Gln Tyr Tyr Gly Phe Ser His Thr Met Gly Arg
 805 810 815

Leu Arg Arg Asp Arg Trp Ser Ser Val Val Pro Arg Val Val Glu Leu
 820 825 830

Asn Lys Asn Ser Gly Thr Asp Glu Val Val Val Pro Leu Asp Asn Leu
 835 840 845

Gly Asn Pro Asn Cys Asp Gly His Gln Gln Gly Tyr Ala Pro Lys Trp
 850 855 860

Arg Ala Glu Asp Ala Pro Leu
 865 870

<210> 11
<211> 871
<212> PRT
<213> Rattus norvegicus

<400> 11

Met Ala Asp Pro Gly Asp Gly Pro Arg Ala Ala Pro Gly Asp Val Ala
1 5 10 15

Glu Pro Pro Gly Asp Glu Ser Gly Thr Ser Gly Gly Glu Ala Phe Pro
20 25 30

Leu Ser Ser Leu Ala Asn Leu Phe Glu Gly Glu Glu Gly Ser Ser Ser
35 40 45

Leu Ser Pro Val Asp Ala Ser Arg Pro Ala Gly Pro Gly Asp Gly Arg
50 55 60

Pro Asn Leu Arg Met Lys Phe Gln Gly Ala Phe Arg Lys Gly Val Pro
65 70 75 80

Asn Pro Ile Asp Leu Leu Glu Ser Thr Leu Tyr Glu Ser Ser Val Val
85 90 95

Pro Gly Pro Lys Lys Ala Pro Met Asp Ser Leu Phe Asp Tyr Gly Thr
100 105 110

Tyr Arg His His Pro Ser Asp Asn Lys Arg Trp Arg Arg Lys Val Val
115 120 125

Glu Lys Gln Pro Gln Ser Pro Lys Ala Pro Ala Pro Gln Pro Pro Pro
130 135 140

Ile Leu Lys Val Phe Asn Arg Pro Ile Leu Phe Asp Ile Val Ser Arg
145 150 155 160

Gly Ser Thr Ala Asp Leu Asp Gly Leu Leu Ser Tyr Leu Leu Thr His
165 170 175

Lys Lys Arg Leu Thr Asp Glu Glu Phe Arg Glu Pro Ser Thr Gly Lys
180 185 190

Thr Cys Leu Pro Lys Ala Leu Leu Asn Leu Ser Asn Gly Arg Asn Asp
195 200 205

Thr Ile Pro Val Leu Leu Asp Ile Ala Glu Arg Thr Gly Asn Met Arg
210 215 220

Glu Phe Ile Asn Ser Pro Phe Arg Asp Ile Tyr Tyr Arg Gly Gln Thr
225 230 235 240

Ala Leu His Ile Ala Ile Glu Arg Arg Cys Lys His Tyr Val Glu Leu
245 250 255

Leu Val Ala Gln Gly Ala Asp Val His Ala Gln Ala Arg Gly Arg Phe
260 265 270

Phe Gln Pro Lys Asp Glu Gly Gly Tyr Phe Tyr Phe Gly Glu Leu Pro
275 280 285

Leu Ser Leu Ala Ala Cys Thr Asn Gln Pro His Ile Val Asn Tyr Leu
290 295 300

Thr Glu Asn Pro His Lys Lys Ala Asp Met Arg Arg Gln Asp Ser Arg
305 310 315 320

Gly Asn Thr Val Leu His Ala Leu Val Ala Ile Ala Asp Asn Thr Arg
325 330 335

Glu Asn Thr Lys Phe Val Thr Lys Met Tyr Asp Leu Leu Leu Leu Lys
340 345 350

Cys Ser Arg Leu Phe Pro Asp Ser Asn Leu Glu Thr Val Leu Asn Asn
355 360 365

Asp Gly Leu Ser Pro Leu Met Met Ala Ala Lys Thr Gly Lys Ile Gly
370 375 380

Val Phe Gln His Ile Ile Arg Arg Glu Val Thr Asp Glu Asp Thr Arg
385 390 395 400

His Leu Ser Arg Lys Phe Lys Asp Trp Ala Tyr Gly Pro Val Tyr Ser
405 410 415

Ser Leu Tyr Asp Leu Ser Ser Leu Asp Thr Cys Gly Glu Glu Val Ser
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Val Leu Glu Ile Leu Val Tyr Asn Ser Lys Ile Glu Asn Arg His Glu
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Met Leu Ala Val Glu Pro Ile Asn Glu Leu Leu Arg Asp Lys Trp Arg
450 455 460

Lys Phe Gly Ala Val Ser Phe Tyr Ile Asn Val Val Ser Tyr Leu Cys
465 470 475 480

Ala Met Val Ile Phe Thr Leu Thr Ala Tyr Tyr Gln Pro Leu Glu Gly
485 490 495

Thr Pro Pro Tyr Pro Tyr Arg Thr Thr Val Asp Tyr Leu Arg Leu Ala
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Gly Glu Val Ile Thr Leu Leu Thr Gly Val Leu Phe Phe Phe Thr Ser
515 520 525

Ile Lys Asp Leu Phe Met Lys Lys Cys Pro Gly Val Asn Ser Leu Phe
530 535 540

Val Asp Gly Ser Phe Gln Leu Leu Tyr Phe Ile Tyr Ser Val Leu Val
545 550 555 560

Val Val Ser Ala Ala Leu Tyr Leu Ala Gly Ile Glu Ala Tyr Leu Ala
565 570 575

Val Met Val Phe Ala Leu Val Leu Gly Trp Met Asn Ala Leu Tyr Phe
580 585 590

Thr Arg Gly Leu Lys Leu Thr Gly Thr Tyr Ser Ile Met Ile Gln Lys
595 600 605

Ile Leu Phe Lys Asp Leu Phe Arg Phe Leu Leu Val Tyr Leu Leu Phe
610 615 620

Met Ile Gly Tyr Ala Ser Ala Leu Val Thr Leu Leu Asn Pro Cys Thr
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Asn Met Lys Val Cys Asn Glu Asp Gln Ser Asn Cys Thr Val Pro Ser
645 650 655

Tyr Pro Ala Cys Arg Asp Ser Glu Thr Phe Ser Ala Phe Leu Leu Asp
 660 665 670
 Leu Phe Lys Leu Thr Ile Gly Met Gly Asp Leu Glu Met Leu Ser Ser
 675 680 685
 Ala Lys Tyr Pro Val Val Phe Ile Leu Leu Leu Val Thr Tyr Ile Ile
 690 695 700
 Leu Thr Phe Val Leu Leu Leu Asn Met Leu Ile Ala Leu Met Gly Glu
 705 710 715 720
 Thr Val Gly Gln Val Ser Lys Glu Ser Lys His Ile Trp Lys Leu Gln
 725 730 735
 Trp Ala Thr Thr Ile Leu Asp Ile Glu Arg Ser Phe Pro Val Phe Leu
 740 745 750
 Arg Lys Ala Phe Arg Ser Gly Glu Met Val Thr Val Gly Lys Ser Ser
 755 760 765
 Asp Gly Thr Pro Asp Arg Arg Trp Cys Phe Arg Val Asp Glu Val Asn
 770 775 780
 Trp Ser His Trp Asn Gln Asn Leu Gly Ile Ile Asn Glu Asp Pro Gly
 785 790 795 800
 Lys Ser Glu Ile Tyr Gln Tyr Tyr Gly Phe Ser His Thr Met Gly Arg
 805 810 815
 Leu Arg Arg Asp Arg Trp Ser Ser Val Val Pro Arg Val Val Glu Leu
 820 825 830
 Asn Lys Asn Ser Gly Thr Asp Glu Val Val Val Pro Leu Asp Asn Leu
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 Gly Asn Pro Asn Cys Asp Gly His Gln Gln Gly Tyr Ala Pro Lys Trp
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 Arg Ala Glu Asp Ala Pro Leu
 865 870

<211> 3211
<212> DNA
<213> Rattus norvegicus

<400> 12

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<210> 13
<211> 870
<212> PRT
<213> Mus musculus

<400> 13

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Glu Pro Pro Gly Asp Glu Ser Gly Thr Ser Gly Gly Glu Ala Phe Pro
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Leu Ser Ser Leu Ala Asn Leu Phe Glu Gly Glu Glu Ser Ser Phe Ser
35 40 45

Tyr Pro Arg Trp Thr Ala Ser Arg Pro Ala Gly Pro Gly Asp Gly Arg
50 55 60

Pro Asn Leu Arg Met Lys Phe Arg Ser Ala Phe Arg Lys Gly Val Pro
65 70 75 80

Asn Pro Ile Asp Leu Leu Glu Ser Thr Leu Tyr Glu Ser Ser Val Val
85 90 95

Pro Gly Pro Lys Lys Ala Pro Met Asp Ser Leu Phe Asp Tyr Gly Thr
100 105 110

Tyr Arg His His Pro Ser Asp Asn Lys Arg Trp Arg Arg Lys Val Val
115 120 125

Glu Lys Gln Pro Gln Ser Pro Lys Ala Pro Ala Pro Gln Pro Pro Pro
130 135 140

Ile Leu Lys Val Phe Asn Arg Pro Ile Leu Phe Asp Ile Val Ser Arg
145 150 155 160

Gly Ser Thr Ala Asp Leu Asp Gly Leu Leu Ser Phe Leu Leu Thr His
165 170 175

Lys Lys Arg Leu Thr Asp Glu Glu Phe Arg Glu Pro Ser Thr Gly Lys
180 185 190

Thr Cys Leu Pro Lys Ala Leu Leu Asn Leu Ser Asn Gly Arg Asn Asp
195 200 205

Thr Ile Pro Val Leu Leu Asp Ile Ala Glu Arg Thr Gly Asn Met Arg
 210 215 220

Glu Phe Ile Asn Ser Pro Phe Arg Asp Ile Tyr Tyr Arg Gly Gln Thr
 225 230 235 240

Ser Leu His Ile Ala Ile Glu Arg Arg Cys Lys His Tyr Val Glu Leu
 245 250 255

Leu Val Ala Gln Gly Ala Asp Val His Ala Gln Ala Arg Gly Arg Phe
 260 265 270

Phe Gln Pro Lys Asp Glu Gly Gly Tyr Phe Tyr Phe Gly Glu Leu Pro
 275 280 285

Leu Ser Leu Ala Ala Cys Thr Asn Gln Pro His Ile Val Asn Tyr Leu
 290 295 300

Thr Glu Asn Pro His Lys Lys Ala Asp Met Arg Arg Gln Asp Ser Arg
 305 310 315 320

Gly Asn Thr Val Leu His Ala Leu Val Ala Ile Ala Asp Asn Thr Arg
 325 330 335

Glu Asn Thr Lys Phe Val Thr Lys Met Tyr Asp Leu Leu Leu Leu Lys
 340 345 350

Cys Ser Arg Leu Phe Pro Asp Ser Asn Leu Glu Thr Val Leu Asn Asn
 355 360 365

Asp Gly Leu Ser Pro Leu Met Met Ala Ala Lys Thr Gly Lys Ile Gly
 370 375 380

Val Phe Gln His Ile Ile Arg Arg Glu Val Thr Asp Glu Asp Thr Arg
 385 390 395 400

His Leu Ser Arg Lys Phe Lys Asp Trp Ala Tyr Gly Pro Val Tyr Ser
 405 410 415

Ser Leu Tyr Asp Leu Ser Ser Leu Asp Thr Cys Gly Glu Glu Val Ser
 420 425 430

Val Leu Glu Ile Leu Val Tyr Asn Ser Lys Ile Glu Asn Arg His Glu
435 440 445

Met Leu Ala Val Glu Pro Ile Asn Glu Leu Leu Arg Asp Lys Trp Arg
450 455 460

Lys Phe Gly Ala Val Ser Phe Tyr Ile Asn Val Val Pro Tyr Leu Cys
465 470 475 480

Ala Met Val Ile Phe Thr Leu Thr Ala Tyr Tyr Gln Pro Leu Glu Gly
485 490 495

Thr Pro Pro Tyr Pro Tyr Arg Thr Thr Val Asp Tyr Leu Arg Leu Ala
500 505 510

Gly Glu Val Ile Thr Leu Phe Thr Gly Val Leu Phe Phe Phe Thr Ser
515 520 525

Ile Lys Asp Leu Phe Thr Lys Lys Cys Pro Gly Val Asn Ser Leu Phe
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Val Asp Gly Ser Phe Gln Leu Leu Tyr Phe Ile Tyr Ser Val Leu Val
545 550 555 560

Val Val Ser Ala Ala Leu Tyr Leu Ala Gly Ile Glu Ala Tyr Leu Ala
565 570 575

Val Met Val Phe Ala Leu Val Leu Gly Trp Met Asn Ala Leu Tyr Phe
580 585 590

Thr Arg Gly Leu Lys Leu Thr Gly Thr Tyr Ser Ile Met Ile Gln Lys
595 600 605

Ile Leu Phe Lys Asp Leu Phe Arg Phe Leu Leu Val Tyr Leu Leu Phe
610 615 620

Met Ile Gly Tyr Ala Ser Ala Leu Val Thr Leu Leu Asn Pro Cys Thr
625 630 635 640

Asn Met Lys Val Cys Asp Glu Asp Gln Ser Asn Cys Thr Val Pro Thr
645 650 655

Tyr Pro Ala Cys Arg Asp Ser Glu Thr Phe Ser Ala Phe Leu Leu Asp
660 665 670

Leu Phe Lys Leu Thr Ile Gly Met Gly Asp Leu Glu Met Leu Ser Ser
675 680 685

Ala Lys Tyr Pro Val Val Phe Ile Leu Leu Leu Val Thr Tyr Ile Ile
690 695 700

Leu Thr Phe Val Leu Leu Leu Asn Met Leu Ile Ala Leu Met Gly Glu
705 710 715 720

Thr Val Gly Gln Val Ser Lys Glu Ser Lys His Ile Trp Lys Leu Gln
725 730 735

Trp Ala Thr Thr Ile Leu Asp Ile Glu Arg Ser Phe Pro Val Phe Leu
740 745 750

Arg Lys Ala Phe Arg Ser Gly Glu Met Val Thr Val Gly Lys Ser Ser
755 760 765

Asp Gly Thr Pro Asp Arg Arg Trp Cys Phe Arg Val Asp Glu Val Asn
770 775 780

Trp Ser His Trp Asn Gln Asn Leu Gly Ile Ile Asn Glu Asp Pro Gly
785 790 795 800

Ser Glu Ile Tyr Gln Tyr Tyr Gly Phe Ser His Thr Val Gly Arg Leu
805 810 815

Arg Arg Asp Arg Trp Ser Ser Val Val Pro Arg Val Val Glu Leu Asn
820 825 830

Lys Asn Ser Ser Ala Asp Glu Val Val Val Pro Leu Asp Asn Leu Gly
835 840 845

Asn Pro Asn Cys Asp Gly His Gln Gln Gly Tyr Ala Pro Lys Trp Arg
850 855 860

Thr Asp Asp Ala Pro Leu
865 870

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<212> DNA
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<211> 852
<212> PRT
<213> Gallus gallus

<400> 15

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Thr Pro Ser Pro Ala Glu Pro Ser Arg Gly Pro Pro Gly Ala Gly Asp
35 40 45

Gly Lys Gln Asn Leu Arg Met Lys Phe His Gly Ala Phe Arg Lys Gly
50 55 60

Pro Pro Lys Pro Met Glu Leu Leu Glu Ser Thr Ile Tyr Glu Ser Ser
65 70 75 80

Val Val Pro Ala Pro Lys Lys Ala Pro Met Asp Ser Leu Phe Asp Tyr
85 90 95

Gly Thr Tyr Arg Gln His Pro Ser Glu Asn Lys Arg Trp Arg Arg Arg
100 105 110

Val Val Glu Lys Pro Val Ala Gly Thr Lys Gly Pro Ala Pro Asn Pro
115 120 125

Pro Pro Val Leu Lys Val Phe Asn Arg Pro Ile Leu Phe Asp Ile Val
130 135 140

Ser Arg Gly Ser Pro Asp Gly Leu Glu Gly Leu Leu Ser Phe Leu Leu
145 150 155 160

Thr His Lys Lys Arg Leu Thr Asp Glu Glu Phe Arg Glu Pro Ser Thr
165 170 175

Gly Lys Thr Cys Leu Pro Lys Ala Leu Leu Asn Leu Ser Ala Gly Arg
180 185 190

Asn Asp Thr Ile Pro Ile Leu Leu Asp Ile Ala Glu Lys Thr Gly Asn
195 200 205

Met Arg Glu Phe Ile Asn Ser Pro Phe Arg Asp Val Tyr Tyr Arg Gly
210 215 220

Gln Thr Ala Leu His Ile Ala Ile Glu Arg Arg Cys Lys His Tyr Val
225 230 235 240

Glu Leu Leu Val Glu Lys Gly Ala Asp Val His Ala Gln Ala Arg Gly
245 250 255

Arg Phe Phe Gln Pro Lys Asp Glu Gly Gly Tyr Phe Tyr Phe Gly Glu
260 265 270

Leu Pro Leu Ser Leu Ala Ala Cys Thr Asn Gln Pro His Ile Val His
275 280 285

Tyr Leu Thr Glu Asn Gly His Lys Gln Ala Asp Leu Arg Arg Gln Asp
290 295 300

Ser Arg Gly Asn Thr Val Leu His Ala Leu Val Ala Ile Ala Asp Asn
305 310 315 320

Thr Arg Glu Asn Thr Lys Phe Val Thr Lys Met Tyr Asp Leu Leu Leu
325 330 335

Ile Lys Cys Ala Lys Leu Phe Pro Asp Thr Asn Leu Glu Ala Leu Leu
340 345 350

Asn Asn Asp Gly Leu Ser Pro Leu Met Met Ala Ala Lys Thr Gly Lys
355 360 365

Ile Gly Ile Phe Gln His Ile Ile Arg Arg Glu Ile Ala Asp Glu Asp
370 375 380

Val Arg His Leu Ser Arg Lys Phe Lys Asp Trp Ala Tyr Gly Pro Val
385 390 395 400

Tyr Ser Ser Leu Tyr Asp Leu Ser Ser Leu Asp Thr Cys Gly Glu Glu
405 410 415

Val Ser Val Leu Glu Ile Leu Val Tyr Asn Ser Lys Ile Glu Asn Arg
420 425 430

His Glu Met Leu Ala Val Glu Pro Ile Asn Glu Leu Leu Arg Asp Lys
435 440 445

Trp Arg Lys Phe Gly Ala Val Ser Phe Tyr Ile Ser Val Val Ser Tyr
450 455 460

Leu Cys Ala Met Ile Ile Phe Thr Leu Ile Ala Tyr Tyr Arg Pro Met
465 470 475 480

Glu Gly Pro Pro Pro Tyr Pro Tyr Thr Thr Thr Ile Asp Tyr Leu Arg
485 490 495

Leu Ala Gly Glu Ile Ile Thr Leu Leu Thr Gly Ile Leu Phe Phe Phe
500 505 510

Ser Asn Ile Lys Asp Leu Phe Met Lys Lys Cys Pro Gly Val Asn Ser
515 520 525

Phe Phe Ile Asp Gly Ser Phe Gln Leu Leu Tyr Phe Ile Tyr Ser Val
530 535 540

Leu Val Ile Val Thr Ala Gly Leu Tyr Leu Gly Gly Val Glu Ala Tyr
545 550 555 560

Leu Ala Val Met Val Phe Ala Leu Val Leu Gly Trp Met Asn Ala Leu
565 570 575

Tyr Phe Thr Arg Gly Leu Lys Leu Thr Gly Thr Tyr Ser Ile Met Ile
580 585 590

Gln Lys Ile Leu Phe Lys Asp Leu Phe Arg Phe Leu Leu Val Tyr Leu
595 600 605

Leu Phe Met Ile Gly Tyr Ala Ser Ala Leu Val Ser Leu Leu Asn Pro
610 615 620

Cys Pro Ser Ser Glu Ser Cys Ser Glu Asp His Ser Asn Cys Thr Leu
625 630 635 640

Pro Thr Tyr Pro Ser Cys Arg Asp Ser Gln Thr Phe Ser Thr Phe Leu
645 650 655

Leu Asp Leu Phe Lys Leu Thr Ile Gly Met Gly Asp Leu Glu Met Leu
660 665 670

Glu Ser Ala Lys Tyr Pro Gly Val Phe Ile Ile Leu Leu Val Thr Tyr
675 680 685

Ile Ile Leu Thr Phe Val Leu Leu Leu Asn Met Leu Ile Ala Leu Met
690 695 700

Gly Glu Thr Val Gly Gln Val Ser Lys Glu Ser Lys His Ile Trp Lys
705 710 715 720

Leu Gln Trp Ala Thr Thr Ile Leu Asp Ile Glu Arg Ser Phe Pro Leu
725 730 735

Phe Leu Arg Arg Ala Phe Arg Ser Gly Glu Met Val Thr Val Gly Lys
740 745 750

Gly Thr Asp Gly Thr Pro Asp Arg Arg Trp Cys Phe Arg Val Asp Glu
755 760 765

Val Asn Trp Ser His Trp Asn Gln Asn Leu Gly Ile Ile Ser Glu Asp
770 775 780

Pro Gly Lys Ser Asp Thr Tyr Gln Tyr Tyr Gly Phe Ser His Thr Val
785 790 795 800

Gly Arg Leu Arg Arg Asp Arg Trp Ser Thr Val Val Pro Arg Val Val
805 810 815

Glu Leu Asn Lys Ser Cys Pro Thr Glu Asp Val Val Val Pro Leu Gly
820 825 830

Thr Met Gly Thr Ala Glu Ala Arg Glu Arg Arg His Gly Gln Thr Pro
835 840 845

Ser Ser Pro Leu
850

<210> 16
<211> 3068
<212> DNA
<213> Gallus gallus

<400> 16

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caccaaccac cacaagccaa tggcttttgc cccaagggtg ggtttgtttt tgtttttttt	2940
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aaaaaaaaa	3068

<210> 17
 <211> 707
 <212> PRT
 <213> Rattus norvegicus

<400> 17

Ala Gly Glu Lys Pro Pro Arg Leu Tyr Asp Arg Arg Ser Ile Phe Asp

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		20						25					30				
Leu	Gln	Arg	Ser	Lys	Lys	Arg	Leu	Thr	Asp	Ser	Glu	Phe	Lys	Asp	Pro		
		35					40					45					
Glu	Thr	Gly	Lys	Thr	Cys	Leu	Leu	Lys	Ala	Met	Leu	Asn	Leu	His	Asn		
	50					55					60						
Gly	Gln	Asn	Asp	Thr	Ile	Ala	Leu	Leu	Leu	Asp	Val	Ala	Arg	Lys	Thr		
65					70					75					80		
Asp	Ser	Leu	Lys	Gln	Phe	Val	Asn	Ala	Ser	Tyr	Thr	Asp	Ser	Tyr	Tyr		
				85					90					95			
Lys	Gly	Gln	Thr	Ala	Leu	His	Ile	Ala	Ile	Glu	Arg	Arg	Asn	Met	Thr		
			100					105					110				
Leu	Val	Thr	Leu	Leu	Val	Glu	Asn	Gly	Ala	Asp	Val	Gln	Ala	Ala	Ala		
		115					120					125					
Asn	Gly	Asp	Phe	Phe	Lys	Lys	Thr	Lys	Gly	Arg	Pro	Gly	Phe	Tyr	Phe		
	130					135					140						
Gly	Glu	Leu	Pro	Leu	Ser	Leu	Ala	Ala	Cys	Thr	Asn	Gln	Leu	Ala	Ile		
145					150					155					160		
Val	Lys	Phe	Leu	Leu	Gln	Asn	Ser	Trp	Gln	Pro	Ala	Asp	Ile	Ser	Ala		
				165					170					175			
Arg	Asp	Ser	Val	Gly	Asn	Thr	Val	Leu	His	Ala	Leu	Val	Glu	Val	Ala		
			180					185					190				
Asp	Asn	Thr	Val	Asp	Asn	Thr	Lys	Phe	Val	Thr	Ser	Met	Tyr	Asn	Glu		
		195					200					205					
Ile	Leu	Ile	Leu	Gly	Ala	Lys	Leu	His	Pro	Thr	Leu	Lys	Leu	Glu	Glu		
	210					215					220						
Ile	Thr	Asn	Arg	Lys	Gly	Leu	Thr	Pro	Leu	Ala	Leu	Ala	Ala	Ser	Ser		
225					230					235					240		

Gly	Lys	Ile	Gly	Val	Leu	Ala	Tyr	Ile	Leu	Gln	Arg	Glu	Ile	His	Glu	245	250	255	
Pro	Glu	Cys	Arg	His	Leu	Ser	Arg	Lys	Phe	Thr	Glu	Trp	Ala	Tyr	Gly	260	265	270	
Pro	Val	His	Ser	Ser	Leu	Tyr	Asp	Leu	Ser	Cys	Ile	Asp	Thr	Cys	Glu	275	280	285	
Lys	Asn	Ser	Val	Leu	Glu	Val	Ile	Ala	Tyr	Ser	Ser	Ser	Glu	Thr	Pro	290	295	300	
Asn	Arg	His	Asp	Met	Leu	Leu	Val	Glu	Pro	Leu	Asn	Arg	Leu	Leu	Gln	305	310	315	320
Asp	Lys	Trp	Asp	Arg	Phe	Val	Lys	Arg	Ile	Phe	Tyr	Phe	Asn	Phe	Phe	325	330	335	
Val	Tyr	Cys	Leu	Tyr	Met	Ile	Ile	Phe	Thr	Ala	Ala	Ala	Tyr	Tyr	Arg	340	345	350	
Pro	Val	Glu	Gly	Leu	Pro	Pro	Tyr	Lys	Leu	Lys	Asn	Thr	Val	Gly	Asp	355	360	365	
Tyr	Arg	Val	Thr	Gly	Glu	Ile	Leu	Ser	Val	Ser	Gly	Gly	Val	Tyr	Phe	370	375	380	
Phe	Phe	Arg	Gly	Ile	Gln	Tyr	Phe	Leu	Gln	Arg	Arg	Pro	Ser	Leu	Lys	385	390	395	400
Ser	Leu	Phe	Val	Asp	Ser	Tyr	Ser	Glu	Ile	Leu	Phe	Phe	Val	Gln	Ser	405	410	415	
Leu	Phe	Met	Leu	Val	Ser	Val	Val	Leu	Tyr	Phe	Ser	Gln	Arg	Lys	Glu	420	425	430	
Tyr	Val	Ala	Ser	Met	Val	Phe	Ser	Leu	Ala	Met	Gly	Trp	Thr	Asn	Met	435	440	445	
Leu	Tyr	Tyr	Thr	Arg	Gly	Phe	Gln	Gln	Met	Gly	Ile	Tyr	Ala	Val	Met	450	455	460	

Ile	Glu	Lys	Met	Ile	Leu	Arg	Asp	Leu	Cys	Arg	Phe	Met	Phe	Val	Tyr	465	470	475	480
Leu	Val	Phe	Leu	Phe	Gly	Phe	Ser	Thr	Ala	Val	Val	Thr	Leu	Ile	Glu	485	490	495	
Asp	Gly	Lys	Asn	Asn	Ser	Leu	Pro	Met	Glu	Ser	Thr	Pro	His	Lys	Cys	500	505	510	
Arg	Gly	Ser	Ala	Cys	Lys	Gly	Asn	Ser	Tyr	Asn	Ser	Leu	Tyr	Ser	Thr	515	520	525	
Cys	Leu	Glu	Leu	Phe	Lys	Phe	Thr	Ile	Gly	Met	Gly	Asp	Leu	Glu	Phe	530	535	540	
Thr	Glu	Asn	Tyr	Asp	Phe	Lys	Ala	Val	Phe	Ile	Ile	Leu	Leu	Leu	Ala	545	550	555	560
Tyr	Val	Ile	Leu	Thr	Tyr	Ile	Leu	Leu	Leu	Asn	Met	Leu	Ile	Ala	Leu	565	570	575	
Met	Gly	Glu	Thr	Val	Asn	Lys	Ile	Ala	Gln	Glu	Ser	Lys	Asn	Ile	Trp	580	585	590	
Lys	Leu	Gln	Arg	Ala	Ile	Thr	Ile	Leu	Asp	Thr	Glu	Lys	Ser	Phe	Leu	595	600	605	
Lys	Cys	Met	Arg	Lys	Ala	Phe	Arg	Ser	Gly	Lys	Leu	Leu	Gln	Val	Gly	610	615	620	
Phe	Thr	Pro	Asp	Gly	Lys	Asp	Asp	Tyr	Arg	Trp	Cys	Phe	Arg	Val	Asp	625	630	635	640
Glu	Val	Asn	Trp	Thr	Thr	Trp	Asn	Thr	Asn	Val	Gly	Ile	Ile	Asn	Glu	645	650	655	
Asp	Pro	Gly	Asn	Cys	Gly	Val	Lys	Arg	Thr	Leu	Ser	Phe	Ser	Leu	Arg	660	665	670	
Ser	Gly	Arg	Val	Ser	Gly	Arg	Asn	Trp	Lys	Asn	Pro	Leu	Leu	Arg	Asp	675	680	685	

Ala Ser Thr Arg Asp Arg His Ala Thr Gln Gln Glu Glu Val Gln Leu
690 695 700

Lys His Tyr
705

<210> 18
<211> 665
<212> PRT
<213> Rattus norvegicus

<400> 18

Asp Arg Phe Asp Arg Asp Arg Leu Phe Ser Val Val Ser Arg Gly Val
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Pro Glu Glu Leu Thr Gly Leu Leu Glu Tyr Leu Arg Trp Asn Ser Lys
20 25 30

Tyr Leu Thr Asp Ser Ala Tyr Thr Glu Gly Ser Thr Gly Lys Thr Cys
35 40 45

Leu Met Lys Ala Val Leu Asn Leu Gln Asp Gly Val Asn Ala Cys Ile
50 55 60

Met Pro Leu Leu Gln Ile Asp Lys Asp Ser Gly Asn Pro Lys Pro Leu
65 70 75 80

Val Asn Ala Gln Cys Thr Asp Glu Phe Tyr Gln Gly His Ser Ala Leu
85 90 95

His Ile Ala Ile Glu Lys Arg Ser Leu Gln Cys Val Lys Leu Leu Val
100 105 110

Glu Asn Gly Ala Asp Val His Leu Arg Ala Cys Gly Arg Phe Phe Gln
115 120 125

Lys His Gln Gly Thr Cys Phe Tyr Phe Gly Glu Leu Pro Leu Ser Leu
130 135 140

Ala Ala Cys Thr Lys Gln Trp Asp Val Val Thr Tyr Leu Leu Glu Asn
145 150 155 160

Pro His Gln Pro Ala Ser Leu Glu Ala Thr Asp Ser Leu Gly Asn Thr
165 170 175

Val Leu His Ala Leu Val Met Ile Ala Asp Asn Ser Pro Glu Asn Ser
180 185 190

Ala Leu Val Ile His Met Tyr Asp Gly Leu Leu Gln Met Gly Ala Arg
195 200 205

Leu Cys Pro Thr Val Gln Leu Glu Glu Ile Ser Asn His Gln Gly Leu
210 215 220

Thr Pro Leu Lys Leu Ala Ala Lys Glu Gly Lys Ile Glu Ile Phe Arg
225 230 235 240

His Ile Leu Gln Arg Glu Phe Ser Gly Pro Tyr Gln Pro Leu Ser Arg
245 250 255

Lys Phe Thr Glu Trp Cys Tyr Gly Pro Val Arg Val Ser Leu Tyr Asp
260 265 270

Leu Ser Ser Val Asp Ser Trp Glu Lys Asn Ser Val Leu Glu Ile Ile
275 280 285

Ala Phe His Cys Lys Ser Pro Asn Arg His Arg Met Val Val Leu Glu
290 295 300

Pro Leu Asn Lys Leu Leu Gln Glu Lys Trp Asp Arg Leu Val Ser Arg
305 310 315 320

Phe Phe Phe Asn Phe Ala Cys Tyr Leu Val Tyr Met Phe Ile Phe Thr
325 330 335

Val Val Ala Tyr His Gln Pro Ser Leu Asp Gln Pro Pro Ser Ser Lys
340 345 350

Ala Thr Phe Gly Glu Ser Met Leu Leu Leu Gly His Ile Leu Ile Leu
355 360 365

Leu Gly Gly Ile Tyr Leu Leu Leu Gly Gln Leu Trp Tyr Phe Trp Arg
370 375 380

Arg Leu Phe Ile Trp Ile Ser Phe Met Asp Ser Tyr Phe Glu Ile Leu
385 390 395 400

Phe Leu Leu Gln Ala Leu Leu Thr Val Leu Ser Gln Val Leu Arg Phe
 405 410 415

Met Glu Thr Glu Trp Tyr Leu Pro Leu Leu Val Leu Ser Leu Val Leu
 420 425 430

Gly Trp Leu Asn Leu Leu Tyr Tyr Thr Arg Gly Phe Gln His Thr Gly
 435 440 445

Ile Tyr Ser Val Met Ile Gln Lys Val Ile Leu Arg Asp Leu Arg Phe
 450 455 460

Leu Leu Val Tyr Leu Val Phe Leu Phe Gly Phe Ala Val Ala Leu Val
 465 470 475 480

Ser Leu Ser Arg Glu Ala Arg Ser Pro Lys Ala Pro Glu Asp Asn Asn
 485 490 495

Ser Thr Val Thr Glu Gln Pro Thr Val Gly Gln Glu Pro Tyr Arg Ser
 500 505 510

Ile Leu Asp Ala Ser Leu Glu Leu Phe Lys Phe Thr Ile Gly Met Gly
 515 520 525

Glu Leu Ala Phe Gln Glu Gln Leu Arg Phe Arg Gly Val Val Leu Leu
 530 535 540

Leu Leu Leu Ala Tyr Val Leu Leu Thr Tyr Val Leu Leu Leu Asn Met
 545 550 555 560

Leu Ile Ala Leu Met Ser Glu Thr Val Asn His Val Ala Asp Asn Ser
 565 570 575

Trp Ser Ile Trp Lys Leu Gln Lys Ala Ile Ser Val Leu Glu Met Glu
 580 585 590

Asn Gly Tyr Trp Trp Cys Arg Arg Lys Lys His Arg Glu Gly Arg Leu
 595 600 605

Leu Lys Val Gly Thr Arg Gly Asp Gln Thr Pro Asp Glu Arg Trp Cys
 610 615 620

Phe Arg Val Glu Glu Val Asn Trp Ala Ala Trp Glu Lys Thr Leu Pro
625 630 635 640

Thr Leu Ser Glu Asp Pro Ser Gly Pro Gly Ile Thr Gly Asn Lys Lys
645 650 655

Asn Pro Thr Ser Ile Lys Pro Gly Lys
660 665

<210> 19
<211> 644
<212> PRT
<213> Caenorhabditis elegans

<400> 19

Arg Phe Lys Glu His Tyr Ala Leu Trp Lys Leu Asn Lys Arg Gly Val
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Glu Gly Glu Asn Leu Ile His Leu Leu Leu Asn Arg Glu Gln Gln Val
20 25 30

Cys Tyr Glu Ile Ala Arg Ile Leu Leu Lys Arg Phe Pro Gly Met Ala
35 40 45

Asn Asp Ile Tyr Leu Gly Asp Glu Gln Phe Gly Gln Ser Ala Leu His
50 55 60

Leu Ala Ile Val His Asp Asp Tyr Glu Thr Val Ser Leu Leu Leu Asn
65 70 75 80

Ser Lys Ala Asp Val Asn Ala Arg Ala Cys Gly Asn Phe Phe Leu Pro
85 90 95

Glu Asp Phe Lys Leu Thr Asn Lys Ile Thr Asp Tyr Gln Gly Tyr Ala
100 105 110

Tyr Tyr Gly Glu Tyr Pro Leu Ala Phe Ala Ala Cys Phe Gly Asn Lys
115 120 125

Asp Ile Tyr Asp Leu Leu Ile Gln Phe Gly Ala Asn Pro Asn Leu Gln
130 135 140

Asp Ser Phe Gly Asn Thr Ile Leu His Met Cys Val Ile Asn Tyr Ser
145 150 155 160

Ser Ser Met Tyr Ser Tyr Ala Val Arg His Trp Ala Lys Pro Ala Asp
 165 170 175

Pro His Val Val Asn His Ala Gly Phe Thr Pro Leu Thr Leu Ala Thr
 180 185 190

Lys Leu Gly Arg Lys Gln Ile Phe Glu Glu Met Leu Glu Ile Met Lys
 195 200 205

Val Glu Phe Trp Arg Phe Ser Asp Met Thr Cys Ser Ala Tyr Pro Leu
 210 215 220

Asn Thr Leu Asp Thr Ile Gln Pro Asp Gly Ser Thr Asn Tyr Asp Ser
 225 230 235 240

Ala Leu Met Thr Val Ile Asn Gly Ser Thr Pro Glu His Leu Asp Met
 245 250 255

Ile Gly Ser Glu Val Ile Gln Arg Leu Leu Ala Asp Lys Trp Lys Ala
 260 265 270

Phe Ala Gln Arg Lys Leu Ile Glu Arg Leu Val Leu Leu Ile Val Gln
 275 280 285

Leu Ile Thr Leu Ser Ile Val Val Tyr Ile Arg Pro Thr Glu Leu Pro
 290 295 300

Arg Leu Tyr Met Glu Asp Pro Gln Trp Asp Asp Tyr Ile Arg Thr Ala
 305 310 315 320

Cys Glu Leu Leu Thr Ile Leu Asn Cys Ile Phe Phe Val Gly Tyr Gln
 325 330 335

Gln Leu Gly Glu Ile Arg Thr Gln Gly Met Arg Gly Tyr Leu Arg Asn
 340 345 350

Leu Lys Thr Ala Pro Ala Lys Ala Val Phe Cys Ile Ala Asn Leu Phe
 355 360 365

Leu Leu Leu Cys Ile Pro Phe Arg Leu Met Lys Lys His Glu Ile Glu
 370 375 380

Glu Ala Leu Phe Val Phe Ala Leu Pro Gly Ser Trp Ile Phe Leu Leu
385 390 395 400

Phe Phe Ala Arg Ser Ala Lys Leu Thr Gly Pro Phe Val Gln Met Ile
405 410 415

Tyr Ser Met Ile Ala Gly Asp Met Ile Arg Phe Ala Ile Ile Ser Ala
420 425 430

Ile Phe Leu Val Ser Phe Ser Gln Val Phe Tyr Phe Val Gly Lys Asp
435 440 445

Met Asp Ala Lys Gln Lys Leu Glu Asp Thr Asn Pro His Ala Cys Arg
450 455 460

Ile Ser Gly Tyr Thr Ile Tyr Thr Tyr Asn Thr Phe Pro Glu Thr Phe
465 470 475 480

Ile Thr Leu Phe Arg Ala Ser Met Gly Gly Tyr Asp Tyr Glu Glu Phe
485 490 495

Ser Cys Ala Asn Tyr Gln Ala Leu Thr Lys Thr Leu Phe Val Leu Tyr
500 505 510

Met Phe Val Met Pro Ile Met Met Ile Asn Ile Leu Ile Ala Met Met
515 520 525

Gly Asn Thr Tyr Thr Thr Val Ile Ala Gln Ala Glu Lys Ala Trp Arg
530 535 540

Gln Gln Tyr Ala Gln Ile Val Met Val Leu Glu Arg Ser Val Gly Lys
545 550 555 560

Glu Arg Leu Ala Ala Ser Gln Leu Glu Tyr Ser Ile Arg Leu Asp Gln
565 570 575

Glu Gly Ser Ser Gly Met Glu Val Arg Gly Leu Met Val Ile Lys Gln
580 585 590

Thr Lys Lys Thr Arg Ala Arg Gln Arg Lys Gln Ala Ile Tyr Asn Trp
595 600 605

Lys Thr Ile Gly Arg Lys Val Ile His Thr Ile Asp Lys Val Gly Thr
610 615 620

Glu Gln Ala Val Leu Leu Leu His Gly His Asp Arg Leu Asp Arg Val
625 630 635 640

Tyr Glu Asp His

<210> 20
<211> 635
<212> PRT
<213> drosophila melanogaster

<400> 20

Pro Leu Gly Lys Trp Glu Asp His Lys Ala Cys Trp Gln Met Gln Tyr
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Arg Gly Ala Leu Gly Glu Ser Leu Leu His Val Leu Ile Ile Cys Asp
20 25 30

Ser Lys Val His Thr Lys Leu Ala Arg Val Leu Leu Arg Val Phe Pro
35 40 45

Asn Leu Ala Leu Asp Val Met Glu Gly Glu Glu Tyr Leu Gly Ala Ser
50 55 60

Ala Leu His Leu Ser Ile Ala Tyr Ser Asn Asn Glu Leu Val Ala Asp
65 70 75 80

Leu Ile Glu Ala Gly Ala Asp Ile His Gln Arg Ala Ile Gly Ser Phe
85 90 95

Phe Leu Pro Arg Asp Gln Gln Arg Ala Asn Tyr Met Gly Glu Tyr Pro
100 105 110

Leu Ala Trp Ala Ala Cys Cys Ala Asn Glu Ser Val Tyr Asn Leu Leu
115 120 125

Val Asp Cys Gly Ser Asp Pro Asp Ala Gln Asp Ser Phe Gly Asn Met
130 135 140

Ile Leu His Met Val Val Val Cys Asp Lys Leu Asp Met Phe Gly Tyr
145 150 155 160

Ala Leu Arg His Pro Lys Thr Pro Ala Lys Asn Gly Ile Val Asn Gln
165 170 175

Thr Gly Leu Thr Pro Leu Thr Leu Ala Cys Lys Leu Gly Arg Ala Glu
180 185 190

Val Phe Arg Glu Met Leu Glu Leu Ser Ala Arg Glu Phe Trp Arg Tyr
195 200 205

Ser Asn Ile Thr Cys Ser Gly Tyr Pro Leu Asn Ala Leu Asp Thr Leu
210 215 220

Leu Pro Asp Gly Arg Thr Asn Trp Asn Ser Ala Leu Phe Ile Ile Leu
225 230 235 240

Asn Gly Thr Lys Pro Glu His Leu Asp Met Leu Asp Gly Gly Ile Ile
245 250 255

Gln Arg Leu Leu Glu Glu Lys Trp Lys Thr Phe Ala Gln Asn Gln Phe
260 265 270

Leu Lys Arg Leu Leu Ile Leu Ser Thr His Leu Leu Cys Leu Ser Val
275 280 285

Ser Val Tyr Leu Arg Pro Ala His Asp Gly Glu Ala Glu Asp Glu Asp
290 295 300

Ser Glu Gly Ser Asp Ala Ser Ala Ala Ala Leu Leu Thr Leu Val Gly
305 310 315 320

Val Leu Ser Tyr Val Ile Phe Gln Gln Gly Asp Glu Ile Lys Asn Gln
325 330 335

Gly Leu Ser Ala Phe Leu Lys Gln Leu Ser His Ala Pro Ala Lys Ala
340 345 350

Ile Phe Leu Phe Ser Asn Leu Leu Ile Leu Ala Cys Ile Pro Phe Arg
355 360 365

Leu Ile Gly Asp Thr Asp Thr Glu Glu Ala Ile Leu Ile Phe Ala Val
370 375 380

Pro Gly Ser Trp Phe Leu Leu Met Phe Phe Ala Gly Ala Ile Arg Leu
385 390 395 400

Thr Gly Pro Phe Val Thr Met Ile Tyr Ser Met Ile Thr Gly Asp Met
405 410 415

Phe Thr Phe Gly Ile Ile Tyr Cys Ile Val Leu Cys Gly Phe Ser Gln
420 425 430

Ala Phe Tyr Phe Leu Tyr Lys Gly His Pro Gln Val Gln Ser Thr Met
435 440 445

Phe Asn Thr Tyr Thr Ser Thr Trp Met Ala Leu Phe Gln Thr Thr Leu
450 455 460

Gly Asp Tyr Asn Tyr Pro Asp Leu Asn Gln Thr Thr Tyr Pro Asn Leu
465 470 475 480

Ser Lys Thr Val Phe Val Ile Phe Met Ile Phe Val Pro Ile Leu Leu
485 490 495

Leu Asn Met Leu Ile Ala Met Met Gly Asn Thr Tyr Val Thr Val Ile
500 505 510

Glu Gln Ser Glu Lys Glu Trp Met Lys Gln Trp Ala Lys Ile Val Val
515 520 525

Thr Leu Glu Arg Ala Val Pro Gln Ala Asp Ala Lys Gly Tyr Leu Glu
530 535 540

Ala Tyr Ser Ile Pro Leu Gly Pro Ser Asp Asp Ser Gly Phe Glu Val
545 550 555 560

Arg Gly Val Met Val Ile Lys Ser Lys Ser Lys Thr Arg Ala Lys Gln
565 570 575

Arg Lys Gly Ala Val Ser Asn Trp Lys Arg Val Gly Arg Val Thr Leu
580 585 590

Thr Ala Leu Lys Lys Arg Gly Met Thr Gly Glu Glu Met Arg Arg Leu
595 600 605

Met Trp Gly Arg Ala Ser Ile Ser Ser Pro Val Lys Val Thr Lys Gln
610 615 620

Lys Leu Lys Asp Pro Tyr Asn Leu His Thr Asp
625 630 635